

## Completed Pollution Prevention Project Case Study

United States Department of Energy  
Office of Environmental Management  
Fact Sheet

### **Metal Recycled at the Los Alamos Neutron Science Center Los Alamos National Laboratory**

#### Original Problem

Metal items in the neutron beam line at the Los Alamos Neutron Science Center (LANSCE) become slightly irradiated over time and must ultimately be disposed of as low-level or mixed low-level waste unless a recycling option exists. LANSCE wanted to replace some protective steel shutters filled with mercury, but this material had no path forward as waste.

#### The Project Solution

LANSCE received assistance from a company called GTS Duratek. The mercury was completely drained from the shutters at LANSCE, and then the steel was sent to GTS Duratek to be melted down. The steel was reused only in products where trace radioactivity does not matter.

#### Value of Improvement

The steel was melted down and reused in steel shielding blocks and in steel drums for storing transuranic waste at the Waste Isolation Pilot Plant. These new items crafted at GTS Duratek are made available to any facility in the DOE complex.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	~10 cubic meters
Commencement Date	2002
Project Useful Life (Years)	NA



#### DOE Monetary Benefits

Total Project Cost	NA
Lifecycle Savings	~\$50,000
Return on Investment	NA

#### Benefits At-A-Glance

- Approximately 10 cubic meters of steel was recycled into useful items instead of being treated as waste.
- LANSCE saved about \$50,000 in waste disposal costs.
- New shielding panels and storage drums were built with recovered metal.

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	<b>Summary Data</b>
Priority Area:	Waste Minimization Projects
Project Type:	Source Reduction
Total Project Cost:	NA
Lifecycle Savings:	~\$50,000
Implementing Group:	LANSCE
Benefiting Group:	LANSCE
Useful Life Years:	NA
Return on Investment:	NA
Lifecycle Waste Reduction:	~10 cubic meters
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